CAUSES OF RAILWAY ACCIDENTS.

CAPTAIN HUISH'S ESSAY.

CAPT. HUISH has been for some years the general manager of the London and North-Western Railway, and he therefore brings to the subject much personal and practical experience. At the present moment, when the delinquencies of railway companies, both in regard to safety and to punctuality, are being brought prominently before the public, the expression of his opinions is valuable.

After a vague allusion to other sources of accident, — those attending conveyance by horses—those occurring to pedestrians—the casualties to steam boats, and deaths in mining,—it is pleaded "that due regard must be had to comparative results," and that undue importance has been given to railway accidents owing "to the statistics of railways, and the periodical publication of the Government returns." That this is so perhaps cannot be denied. But no arguments can be founded on things so utterly dissimilar and distinct. Nor can the evils and dangers attending on one system afford any palliation or excuse for those which attach to another. If comparisons are requisite, surely there should at least be similarity in the things compared. For instance, the accidents on English lines might have been contrasted with those on French and American railways: or even the English lines alone might have been compared the one with the other. Then, indeed, we should have been better able to judge which system was attended with the greatest immunity from danger, and how far the practice of one line could be beneficially altered by the experience of another. But instead, all is simple generality, and throughout the whole paper, statistical details of accidents are carefully avoided. Such a table would be exceedingly useful, particularly if it embraced the results for several years back. It would fix the data on which arguments might be based, and indicate the direction in which alterations and improvements were required. It would, in fact, be doing for the whole railway system what Capt. Huish has done in this paper for the locomotive engine. There could not then be the same discrepancy, as there now most assuredly will be, between the conclusions from his paper arrived at by the different parties, by the railway interest on the one side, and the public on the other.

A great point at issue is, whether safety is, or is not, dependent on punctuality, to the degree the public believe. Accidents arise from various causes. They may be the result of utter carelessness on the part of the individual passenger: they may be produced by obstructions accidentally or wilfully placed on the line: they may even, at times, be attributable to other causes over which the company has no direct or immediate control: yet in each of these cases much depends on efficient regulations, and a due vigilance on the part of the *employées*. But all combined are not the fatal, and certainly not the prominent sources of accident. On the perfection of the road, or "permanent way," depends the safe and economical working of a railway. This has, at all times, been felt by engineers to be the case. Accordingly, more attention has, perhaps, been directed to every detail of the permanent way, than to any other part of the system. The result has been most satisfactory. For, notwithstanding the increased weight, and the increased speed of trains, "it is remarkable how very few accidents have arisen from the road itself." The carrying stock, so far as the locomotive engine and passenger-carriage are concerned, may also be regarded in the same favourable light. Not so the merchandise-waggon, which is stated to be in many instances faulty in model and material. Their want of accordance in size, in the height and gauge of the buffers, and in the mode of coupling, renders accidents, especially to property, of frequent occurrence. The bad quality of the material and its injudicious distribution also tend to the same result. Captain Huish, therefore, suggests that, either by general concert, or by compulsory regulation, the height and gauge of the buffers should be made uniform. Until such time as they are, he says, the risk of accident, and the certainty of damage must continue. As this is really the only practical remedy suggested in the paper for those evils which are repeatedly alarming and surprising mankind, it is to be hoped that no time will be lost in giving it effect. However, the railway itself, and the machinery employed upon it, do not produce, it seems, "a tithe of the accidents which result from inattention to signals, and the neglect of regulations." Here, then, is the bane (presumed at all events) of the system. But we are told, for our author is a bit of a philosopher, as well as a railway manager, that "so long as machinery is material, and human nature fallible, it is to be feared, that although experience and skill may diminish, they will not prevent the recurrence of events that startle society, and cast blame on railway management." So the fallibility of man is the only explanation that can be offered for inattention to signals and neglect of regulations. Has it not, on the contrary, been repeatedly proved, that the regulations are frequently of so conflicting and contradictory a character, that it would puzzle the most ingenious to unravel them? Has it not also been shown that a single individual is often called upon to perform so many various and numerous duties, that their due performance simply amounts to an impossibility? Yet in spite of this, and notwithstanding the rapid increase of traffic, by the opening of new lines and branches, and the further development and extension of the system, it would appear, from Captain Simmons's last report to the Board of Trade, that the number of *persons engaged on railways has been actually diminished*.* But more than all, is it not notorious, that the gradual reduction of wages and salaries has tended to lower the standard of ability of those employed? The mere diminution in numbers is natural enough. It is what might be expected to take place, from improvements in the plant and machinery, and from each person having a more perfect knowledge of his duties. This is, however, only a stronger reason why those who remain should rather be better paid than underpaid.

With regard to punctuality, our author says, that "great weight is generally attached to the question of regularity in the times of the trains, as an essential element in their safety, and whenever an accident occurs, the press and public opinion, as expressed through a jury, seize on this point as the primary cause of the mishap;" whereas, "under a well-regulated system of signals and with a well-disciplined staff, *the greatest irregularity*, whatever inconvenience it may produce, *ought* not to lead to danger." Ought not; but the public say that danger does occur in consequence of irregularity. And there is seeming truth on their side, for there is a remarkable concurrence between delay and accident. In by far the greater number of instances, it will be found that, whatever other causes may have helped to produce the disaster, want of punctuality is invariably one element. This view is singularly enough borne out by an opinion expressed by Captain Huish in an earlier part of his paper. After analysing a thousand cases of engine failures and defects, he says, "Very few, indeed, of the above failures are attended with any direct danger to the public, but, as producing a temporary or permanent inability of the engine to carry on its train, *may be the remote cause of collision*." Signals were introduced as auxiliaries, as a means of averting danger when irregularities arose. Here they are absolutely looked upon as offering a premium for irregularities. It is quite possible that so frequent are the delays, and so frequent the necessity for the use of the danger-signal, that occasionally it is disregarded. But considering the "fallibility of man," it would be a much more natural and practical remedy to endeavour to remove the necessity for complete dependence on his constant vigilance and undivided attention. Clearly if you reduce the amount of irregularity, and the necessity for using these signals, you remove a great part of the chance of danger from "inattention to signals and neglect of regulations." The railway system must be looked upon as a gigantic piece of complicated clockwork or machinery. So long as every part of the machine is in perfect order, all goes well. So long as every train comes round in due succession, all is right. When once, however, a part of that machine, or a train of that railway, is out of order or out of place, the whole thing goes wrong. Confusion, in fact, takes the place of order. True, the immediate impediment may be removed,—the immediate difficulty may be prevented,—still it is only at the expense of some other part of the machine or the system.

* Capt. Huish has since given an explanation of this in the *Times* newspaper, but not satisfactorily.

NOTES IN THE PROVINCES.

Liverpool.—The foundation-stone of a new and enlarged building for the Liverpool Licensed Victuallers' Association Asylum and Schools was laid on Thursday in last week. The site is upwards of an acre of ground, on the south side of the West Derby-road, and cost about 3,000*l*. The style of the building will be Elizabethan. It will be approached by a terrace-walk, about 4 feet high, with steps in the centre. The building will be of patent red brick, with white stone mouldings and dressings. The centre or main elevation will be three stories high. The ground-floor will comprise a vestibule, committee-room, boys' and girls' school-rooms, dining-rooms, and ante-rooms. Each school will receive about forty scholars. Childrens' dormitories, and apartments of master and mistress, will occupy the first-floor; and the third story will be used for invalids and domestics. The offices will be on the basement. The alms-houses will form handsome wings, there being six on each side of the centre building. Each of these will be a compact cottage, with kitchen and parlour on the ground-floor, and two bed-rooms above. The length of the building will be 216 feet. The design and plans have been prepared by Mr. William Daish, architect, and have been presented gratuitously to the committee of the institution. The estimated cost of the edifice is about 2,500*l*. and it is expected to be completed by the middle of next summer.

Salford.—A new Baptist chapel has been completed and opened in Great George-street. The style is Early Tudor, of which there is no similar example in Manchester or Salford. It is composed of stone and bricks on a plain surface, relieved by blue bricks wrought in ornamental characters, in keeping with the style of architecture. The building is entered from a flight of steps, of Yorkshire stone, leading to an open porch, extending across the entire front of the building, and communicating with two subsidiary porches, forming vestibules to the gallery and to the ground-floor of the chapel. In front there are two towers, one of which contains the staircase to the gallery, and another a room for the chapel-keeper, and other rooms of minor importance. The towers are finished with a gabled termination on every side. The roof is an upright slated one, of an ornamental form. In the chapel there are two principal aisles, with side seats and a centre range. At the south end, where there is a stained seven-light window, a gallery is erected for Sunday-school children. On each side of the chapel there are six windows, and at the north end, behind the choir, there are five stained lights in a sort of octagonal projection. Behind the lectern is a large chair, used by the pastor instead of a pulpit. Side galleries may hereafter be erected for at least 400 people. Under the chapel is a school-room, for 400 children. The baptistry, under the choir and behind the minister's seat, is capable of containing about 1,200 gallons of water. The aisles are laid with tesselated pavement. The stone used in the erection is from Hollington, Staffordshire, and the tesselated pavement is from Peakes, Tunstall, in same county. The cost of the chapel, which is seated for 700 persons, was 2,000*l*.

Blackburn.—The foundation of the town-hall was laid on Thursday in last week, on the north side of the market-place. The design is in the Italian style. The principal front presents a range of Corinthian columns, on a rusticated basement, the entablature sur-

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